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AN ANALYSIS OF THE MILITARY RETIREMENT PLAN RECOMMENDED BY THE PRESIDENT'S COMMISSION ON MILITARY COMPENSATION

Mike Calvert, Captain, USAF

LSSR 8-79A

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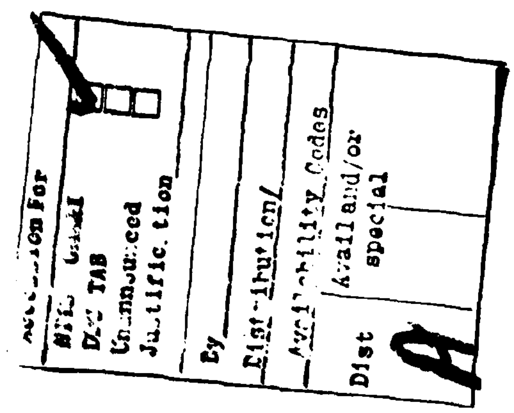

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The rising cost of the U.S. military retirement system has made it increasingly controversial over the last ten years. Consequently, several study groups have recommended changes designed to reduce costs. The President's Commission on Military Compensation (PCMC) recently recommended broad changes to the military retirement system but did not fully predict the effect of proposed changes on personnel retention. The author compared the estimated total annual cost of the present military retirement system with that of the PCMC under like conditions in order to determine if the PCMC proposal would reduce retirement costs. The retention rates expected by DOD analysts were used. The analysis indicated that the PCMC proposal would result in a cost reduction of 38 percent which is consistent with PCMC claims. The thesis also compares the historical background and current provisions of private, U.S. Social Security, and U.S. military retirement pensions.

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Chapter 1

INTRODUCTION

Fringe benefits have become an element of increasing importance in compensation arrangements between workers and their employers. Since the 1930s, the pension component of fringe benefits which seeks to provide income support in nonworking old age has developed at a rapid pace. Daniel M. Holland of the National Bureau of Economic Research attributes this recent, rapid growth in pension plans to several factors.

> Among the common factors accounting for an increase in formal arrangements for support in retirement, one can note the following: the movement of population from the countryside to the city, from agriculture to industry; the growing importance of the aged in number and also relative to the total population; increasing physical life expectancy and, more importantly, a decrease in working-life expectancy, with a consequent pronounced increase in the number of years of nonworking old age; the favorable tax treatment generally provided for pension plans which permits tax-free accumulation over working life and receipt of the deferred income at a time when rates of tax are characteristically low, hence a diminution in aggregate tax liability over one's lifetime [32:1-2].

For career personnel in the Air Force, Army, Navy, and Marines a highly valued fringe benefit has been the retirement pension. Although military pensions have traditionally been viewed as deferred income already earned,

neither the government nor military members make contributions into a fund to pay for future retirement annuities. The military retirement system actually operates on a pay-as-you-go basis with Congress annually appropriating from each year's revenues an amount equal to the military retirement annuities owed to former military personnel (14:11-12). Since these costs were for the most part incurred in the past and are already owed to retirees, little control can be exerted over this part of the Department of Defense (DOD) budget in the short run.

Table 1 shows that annual military retired pay has nearly quadrupled since 1970 while total military personnel costs have risen less than 23 percent. The rising cost of the military retirement system has made it increasingly controversial over the past ten years because pension payments must be made by law; pension payments are made from current revenues; and pension payments cannot be reduced to make the funds available for other purposes. There has been concern that the growing share of the defense budget allocated to pension payments each year has left continually diminishing amounts for purchasing the military hardware needed by the active force to maintain the security of the nation (28:25).

The cost of the military retirement system has risen for several reasons. First, retired pay for new

Table 1

Annual Department of Defense Outlays, Military Personnel Costs, and Military Retirement Costs 1970-1979

Fiscal Year	DOD Annual Outlays ($ Billion)	Annual Military Personnel Costs ($ Billion)	Annual Military Retired Pay ($ Billion)	Personnel Costs as a Percent of Outlays	Retired Pay as a Percent of Outlays	Retired Pay as a Percent of Personnel Costs
1970	77.9	22.5	2.8	28.9	3.6	12.4
1971	75.5	21.9	3.4	29.0	4.5	15.5
1972	76.0	22.1	3.9	29.1	5.1	17.6
1973	73.8	22.3	4.4	30.2	6.0	19.7
1974	78.4	22.8	5.1	29.1	6.5	22.4
1975	86.0	24.1	6.2	27.0	7.2	25.7
1976	88.5	24.3	7.3	27.5	8.2	30.0
1977	95.7	25.0	8.2	26.1	8.6	32.8
1978	105.3	26.1	9.2	24.8	8.7	35.2
1979 (Projected)	115.2	27.6	10.1	24.0	8.8	36.6

Source: U.S. Department of Defense, Manpower Requirements Report for FY 1979 (Washington: Government Printing Office, 1978), p. XIV-30.

retirees has risen as a result of increases in active duty pay as the United States moved toward an all-volunteer military force (53:1) and more recently in response to the increasing cost of living. Second, cost-of-living adjustments have been periodically added to the pension checks of those retired. Third, the number of retirees has been increasing as World War II and Korean conflict veterans have reached retirement during the last ten years (23:276; 43:25-26).

STATEMENT OF THE PROBLEM

Six major studies in the past ten years have addressed military retirement and all have concluded that major changes are needed to cut costs yet provide for the retention of competent personnel (53:1-2). The President's Commission on Military Compensation (PCMC) concluded:

> The military retirement system is wasteful in dollars and human resources. Public and congressional objections to the practice of granting retirement pay after 20 years of service are not likely to lessen, because this system is no longer judged to be fair by most Americans. Reform of retirement is urgently needed to reestablish public confidence and to quiet criticisms that undermine military morale. Moreover, reform is necessary to provide more equitable compensation to service members who serve honorably for many years but fewer than 20 [43:11-12].

The Commission proposed a new retirement plan for the military services. As a result of attention focused on

military retirement by the PCMC, the Carter Administration is committed to changing the military retirement system (41:1,4). It is useful to examine the effect of recommendations made by the PCMC on annual retirement costs using the expected retention rates determined by DOD analysts. In this respect, the PCMC did not fully predict the effect of the proposed plan on the retention of personnel (19; 43:88).

Scope

The present military retirement system consists of reserve retirement, disability retirement, and retirement based on length of service (23:347).

Each service has a reserve component which may be activated in case of a national emergency. A retirement pension is available to those reservists who complete at least 20 years of service but payments do not begin until the retiree has reached age 60. The amount of the annuity is computed in the same manner as annuities based on length of service for career military personnel (23:361-363).

Disability retirement pensions are available both from the Veterans Administration (VA) and the DOD. VA disability pensions are available to those who are disabled by a service-connected disease or injury and are based on the percent of disability. DOD disability pensions are

available to those disabled while entitled to basic pay unless the disability was due to misconduct or negligence. The member must be at least 30 percent disabled to receive a DOD disability pension but may receive a retirement annuity based on length of service if at least 20 years of service have been completed. An individual receiving a DOD disability pension or length of service retirement annuity, who is also eligible for a VA disability pension, may choose to receive the VA pension in place of part or all of the DOD pension as applicable (23:348,358-360).

The largest and most costly part of the military retirement system is retirement based on length of service (23:349), which permits the payment of an immediate annuity of 50 percent of terminal basic pay upon the completion of 20 years of service. This system is explained in detail in Chapter 3.

This analysis will be limited to the plan recommended by the PCMC to replace the present length of service retirement system. Later references to the military retirement system or the present system will refer to retirement based on length of service unless otherwise specified.

Objective

Accordingly, the objective of this thesis is to compare the total annual cost of the present system with

the total annual cost of the system recommended by the PCMC using the personnel retention rates projected by the DOD.

RESEARCH QUESTION

Consequently, this research will attempt to answer the following question: Would the implementation of the military retirement system recommended by the PCMC reduce annual military retirement costs?

Chapter 2

BACKGROUND

In order to fully understand the concern over the military retirement system, it is necessary to be familiar with pension plans in general. By comparing the general principles of retirement income presented in this chapter with the provisions of the military retirement system presented in the next chapter, the reader can better assess the concern over the military retirement system.

The most pervasive sources of retirement income in the United States are U.S. Social Security and private pension plans which each affect over two-thirds of the labor force. This chapter provides historical background followed by general provisions of Social Security and then private pension plans. The closing summary highlights some of the principles of retirement income upon which criticisms of the military retirement system are based.

SOCIAL SECURITY

Historical Background

The Committee on Economic Security was established by President Franklin D. Roosevelt on June 29, 1934, by Executive Order 6757 (56:201-202). The purpose of the

committee was to "study problems relating to the economic security of individuals [56:201]." The "Economic Security Act", containing the committee's proposals and written by a committee member, was introduced as a bill in January 1935. It was subsequently rewritten by the House Ways and Means Committee and renamed the "Social Security Act." The content was generally the same; main changes were in arrangement and wording. Congress passed the Social Security Act and it was signed into law on August 14, 1935 (56:76,81, 97,108).

The original Social Security Act provided for monthly benefits to insured workers completely retired from all employment at age 65. Both the employee and employer made contributions (one percent each on the first $3000 of an employee's annual earnings) through payroll taxes into what was supposed to become a large trust fund. A worker who had contributed but was not fully insured upon retirement was entitled to a refund of his own contributions plus interest. It applied to all workers in industry and commerce but specifically excluded railroad workers (40:251, 259-261).

Amendments to the Social Security Act have broadened its coverage and increased both benefits and tax rates. The first amendment, enacted in 1939, provided the most fundamental revisions and "marked the major turning point in the

historical development of Social Security [40:33]." Whereas the original act emphasized "individual equity" (a worker is at a minimum entitled to his own contributions), the 1939 amendment changed this emphasis and stressed "social adequacy" (pay benefits to families in need) and hence the welfare function. Emphasis was shifted from the individual to the family and from the accumulation of a large trust fund toward a pay-as-you-go method of financing (40:33,260). Amendments in 1950, 1954, 1956, and 1958 broadened coverage to include more workers and increased benefits. The 1956 amendment added disability benefits (30:80-82); and the Medicare program providing medical benefits for the aged was established in 1965 (34:178). While the benefit level has increased several times since 1935, the contribution rate and maximum earnings on which contributions are made have also risen (15:159-163).

Currently there are approximately 30 Social Security recipients for every 100 workers which means that taxes paid by 100 workers provide benefits for 30 (50:53). This moderate ratio of retired persons to workers will increase as demographic changes result in a greater percentage of retirees in the population (20:59). The low birth rate, increasing life expectancy, greater number of working wives, and the trend toward marrying at a later age have all contributed to this phenomenon. Consequently, the ratio of

workers to retirees will decrease to about two to one over the next 75 years. Every two workers will have to pay enough taxes to provide the benefit for one retire (50:53).

According to Campbell, the present labor force pays taxes that fall short of those that will be needed to pay its future benefit payments (20:59). Therefore, Social Security taxes will inevitably continue to rise or benefits will have to be reduced as long as the taxes paid by present workers pay the benefits of present recipients (48:97). However, increasing the tax rate and wage base of Social Security adds to the problem of inflation because businesses do not absorb these costs but pass them on to consumers in higher prices (48:97).

General Provisions

Retirement age. To receive his maximum retirement pension under Social Security a worker must wait until age 65 to retire. At age 62, a worker may retire and get 80 percent of the amount he would be due at 65 (25:665).

Eligibility to participate. Nearly all workers in the U.S. are eligible and in fact required to participate in Social Security. Exceptions are federal civilian employees, railroad workers, and many state and local government employees (25:665).

Vesting. An employee is normally entitled to his own contributions to a pension plan plus interest upon termination of employment. When an employee has a claim on the pension fund as a result of employer contributions in his behalf he has a "vested interest" in the plan. The vesting provision of a pension plan specifies the length of participation in the plan required to become vested, the rate at which these claims on the pension fund build, and when a member becomes 100 percent vested. If an employee leaves after becoming vested, he will have a deferred annuity payable upon retirement. Alternately, some plans allow a terminating employee to take his benefit in a lump sum (46:14).

Although there is no "vesting" provision in Social Security, there are similar requirements to qualify for benefits. Generally, 40 quarters of earnings in employment covered by Social Security are required to be eligible for a retirement pension (54:7-8).

Computation of benefits. The amount of the Social Security retirement pension is generally based on average earnings under Social Security over a period of years. The exact benefit amount can be determined only by the Social Security Administration. The amount of the payment is increased if the retiring worker has dependents eligible for benefits

(54:11-12). The maximum benefit for single retired workers is $490 per month (47:16).

Financing. Currently an employee and his employer are each required to contribute 6.13 percent of the first $22,900 of income earned (47:16). In 1987, the contribution will have risen to 7.15 percent of the first $42,600 earned (35:68). Although these contributions are mandatory, the Social Security Administration implies that they are voluntary (not a tax) by referring to them as contributions. It is important to understand that these contributions do not accumulate in a fund but are used to pay current benefits and administrative costs, so the system operates on a pay-as-you-go basis (54:3,24). This has been a source of criticism for Social Security.

Death benefits. When a worker dies, a lump-sum payment can be made, usually to the widow or widower. In addition, monthly checks can go to certain family members (55:7).

Disability benefits. Only workers who become severely disabled are eligible for Social Security disability checks. Disability checks start in the sixth month of disability (55:7).

Although the coverage of Social Security is almost universal in the United States, approximately two-thirds

of those who will benefit from Social Security are also covered by a private pension plan (27:92-93).

PRIVATE PENSIONS

Historical Background

Pension plans and general planning for retirement were not a major concern before the latter part of the 19th century. Prior to that time older workers did not retire, but remained on the job until death or disability removed them. Those workers who were disabled relied on personal savings, relatives, and public or private charity as a means of support (45:2). Society had no apparent need or desire to formally plan for the support of workers unable to stay on the job.

This lack of formal retirement planning was not the result of a heartless society but stemmed from a combination of economic structure, the basic societal attitudes toward work, and average life expectancy. The economy of the U.S. in the early 19th century was still largely based upon agriculture and as such there was little need for retirement programs. According to Schulz one reason for this was that in an agrarian economy people could always work in some capacity, if only at somewhat less productive tasks (45:3). For example, an aging farm worker could shift from field work of planting and harvesting to less strenuous

activities of tending livestock and preparing food rather than giving up work entirely. This desire to remain on the job was caused partially by a need for productivity but also by the Protestant work ethic (31:55-57).

Greenough and King noted that the Protestant work ethic was a driving force in keeping workers on the job for life. Failure to continue to work in some capacity was considered to be a sign of laziness and weakness. Therefore, it was not uncommon to find the elderly hard at work until the day of death. A factor that reduced the impact of this trend was that the life expectancy was much lower than in modern times (29:29).

As the level of industrialization increased, the aging worker found it more difficult to keep pace with the demands of the job. As noted in one source, "only a young man in his vigorous prime could keep up with the implacable, constantly increasing pace of the mechanized conveyor lines [13:412-413]." The worker now found himself in a position where he could no longer remain at the job until death. There was a point where he was "getting too old to work, yet with increasing life expectancy, too young to die [13:413]." The problem was to determine how to provide for the increasing number of workers "too old to work."

An answer to this problem came in the form of pensions. The first pensions in the United States were

found in the railroad, banking, and public utility industries shortly after the Civil War (38:11). The American Express Company has been credited with establishing the very first plan in the nation in 1875 (3:1). However, these early plans were found to be highly discretionary with respect to the employer. "Early industrial pension plans were viewed as gratuities or rewards to employees for long and loyal service to the employer [3:14]." The employee found himself without any enforceable rights to the benefits of pension plans (1:5). One major reason for this situation was that almost all of these early plans were completely financed by the employer and thus termed non-contributory since the employee made no contributions (29:31).

The discretionary nature of these early plans combined with the fact that employers tended to use the plans as a means of controlling the labor force resulted in the concept of business expediency being applied to the growth of early pensions. The implication was that management's sole motivation in establishing a pension plan was the economic benefit that could be derived from the plan and not the economic well-being of the employees. However, as more pension plans were established, "there was increasing interest in the view that employers had a moral obligation to provide for economic security of retired workers [3:14]." Many new pension plans were established and old ones

improved during World War II as a means of increasing total compensation but complying with wage controls (42:5). Whereas most pension plans before the war had required employee contributions, the new plans developed during the war were for the most part non-contributory (16:82). This led to widespread acceptance of the deferred wage concept, since pension plans were developed to compensate employees who could not be given higher wages due to wage controls during World War II.

The deferred wage concept of pensions suggested an inverse relationship between wages and pension benefits. It was assumed that as more benefits were added to the pension package less money would be available for wage increases. Another concept of pensions is the human depreciation concept. This concept implied that human labor (like machinery) was consumed over a period of time and that the pension was a means to compensate for aging of the human body due to labor. The pros and cons of both concepts have been debated at length in the literature and at present the deferred wage concept has the most acceptance (3:14-16).

Review of General Provisions

Prior to passage of the Employee Retirement Income Security Act (ERISA) in 1974 there was little standardization in private pension plans. The purpose of ERISA was to

prevent misuse of pension funds and to protect the rights of pension beneficiaries (17:68). Nader and Blackwell indicated that millions expected pensions prior to the passage of ERISA but never received them (37:1). Samuelson noted that before ERISA there were no benefits for employees of companies which went out of business and were unable to honor pension commitments to workers. He concluded that private pensions have been greatly improved by ERISA even though many have criticized the controls enacted by this law (44:62). Although ERISA did not require the establishment of a pension plan, it did set minimum requirements to be met by existing plans (51:8). Nevertheless, the provisions of different private plans vary considerably. The purpose of this section is to provide an overview of the provisions of private pension plans. First, the age at which one may begin to collect a pension is discussed.

Retirement age. The normal retirement age has been considered to be 65. This has been rather arbitrary since some workers at age 65 have produced the same or more than younger counterparts. Conversely, others became marginal producers a number of years before reaching 65. Early concerns about this age were for competent employees forced to retire at 65 but Meyer and Fox observed that more recent concerns have indicated a desire that retirement and benefits be available at an earlier age (36:1).

While 65 is still considered the normal retirement age, many plans have been modified to allow retirement at age 60 or 55. Some plans have replaced the retirement age requirement with the provision that an employee may retire after a certain number of years service with full benefits. Mandatory retirement at a specified age or after a certain length of service has been built into some plans (36:3,7).

Eligibility. The stated retirement age of a pension plan must be reached before a person can receive the pension payment but there are also requirements concerning the right to participate in a pension plan. Greenough and King reported that some plans in the past were not available to employees in their early twenties because job turnover was high in that age group. This effort to minimize the administrative costs associated with short term employees involved a specified minimum age and length of service requirement (29:114). Because of ERISA, the highest minimum age and length of service requirements permissable are 25 and one year, respectively, for plans with eligibility for participation based on age and years of service (3:391). Allen, Melone, and Rosenbloom noted that certain workers (such as hourly workers or those above a maximum age) have been excluded from participation in the pension plans of some firms (3:22).

Vesting. A choice of three methods for the vesting of employer contributions is allowed by ERISA. Depending upon the method chosen, partial vesting occurs between five and ten years of covered service and full vesting between ten and fifteen years (29:164). The differences in vesting provisions between private and military pensions have been one source of criticism of the military retirement system, as will be shown in Chapter 3.

Computation of benefits. The goal of a pension plan has generally been to provide a retirement income benefit which ranges from 45 percent of earnings just before retirement for higher paid employees to 70 percent for lower paid employees in conjunction with Social Security benefits (3:31). The amount of annuity provided by private pension plans is usually dependent upon the contributions made to the pension fund by or in behalf of the employee. There are a variety of methods in use to determine the amount of an individual's pension check (3:31-33; 42:9).

Financing. In contrast to Social Security, private pension plans are funded; that is, contributions for employees are accumulated in advance of the time when retirement pensions are paid. Private pension plans have usually been administered by single employers or through multi-employer plans.

Single employer plans may have been voluntarily established by the employer or may have been instituted because of collective bargaining. Multi-employer plans have usually resulted from collective bargaining. When a company in a multi-employer plan has negotiated a pension plan improvement its agreement may become the pattern for companies in similar industries. If only the employer contributes to the plan, it is considered non-contributory (42:5-6). This provides a tax advantage since an individual's contributions are considered income for tax purposes but employer contributions are not taxable (45:115-116). The employee contributions are mandatory (42:6). No contributions are made by the employer or employee toward retirement for military personnel. The pay-as-you-go financing of military retirement pensions has been the major cause of recent controversy over the military retirement system, as is brought out in the next chapter.

Death benefits. Firms have traditionally carried group life insurance to aid surviving family members but the benefits of a deceased employee's pension plan have not been transferred to the survivors as a rule. ERISA has specified that plans must offer married employees a joint-and-survivor annuity pension which pays the spouse half or more of the pension of the deceased worker. However, the right to refuse a joint-and-survivor provision has been given to the worker (46:14).

If an employee dies before retirement, many pension plans have provided for a lump sum death benefit which may be paid monthly to the surviving spouse. These have usually been funded by assets of the plan or through life insurance and have required additional contributions by the employee (3:49-50). Some plans have merely refunded to the survivor the employee's contributions (29:119).

Disability benefits. Some companies have placed disabled employees on a retirement pension. The normal requirement has been permanent and total disability with completion of at least ten years of service. The purchase of disability insurance coverage has also been used by firms to provide income for a disabled person until the age for receipt of a regular pension has been reached (46:14). Disability benefits for military personnel are more generous.

SUMMARY

An overview of Social Security and private pension plans was presented in this chapter to familiarize the reader with the principles of retirement income applicable to most private citizens. Several of these principles should be remembered so that they can be compared with the retirement provisions of the military retirement system provided in the next chapter.

Financing

Social Security operates on a pay-as-you-go basis as current payments into the system are used to pay current benefits. Private pension plans must accumulate funds to pay the future pension benefits of present workers. In both cases, money is collected specifically to pay pension benefits.

Retirement Age

Both Social Security and private plans, for the most part, use age 65 as the normal retirement age. Early retirement provisions are available under each but hardly ever for those below 55.

Vesting

According to ERISA, an individual must be fully vested in a private plan no later than upon the completion of 15 years of service. Social Security requires no more than ten years (40 quarters) of covered earnings for a worker to be fully covered.

Mobility of Workers

The mobility of workers in the U.S. is not affected by Social Security since its coverage extends to nearly all workers in the U.S. However, workers covered by private

plans have stayed at the same job to obtain a vested interest in a pension plan or because a prospective employer had an inferior or no pension plan. Hence, private plans do inhibit worker mobility.

Income Redistribution

Social Security, because it operates on a pay-as-you-go basis, redistributes income from younger workers to older non-workers. Private pensions provide little if any redistribution of income since payments into a pension fund accumulate to pay future obligations.

Deferred Wages

When wages are lower than they would otherwise be due to employer contributions to a pension plan on behalf of an employee, the pension is said to be wages deferred until some point in the future. Private pensions are generally considered to be deferred wages.

Chapter 3

MILITARY RETIREMENT

This chapter provides the background and provisions of the military retirement system together with criticisms of the present system and some proposed changes. Keeping in mind as this chapter is read the principles of retirement income for private citizens presented in Chapter 2 should give an understanding of the reasons for public concern and criticism of the military retirement system.

HISTORICAL BACKGROUND

Military pensions were first granted by governments for faithful and meritorious service in defense of the nation (1:5). The origin of military pensions in the United States dates back to the American Revolution when pensions were used to reward soldiers who fought in that war (29:59). Although pensions for the military continually existed in one form or another from the 18th century onward, the major evolution did not occur until late in the 19th century at a time which nearly coincided with the beginnings of private pension plans.

A review of the significant legislation pertaining to military retirement since 1860 reveals certain elements

which have enabled the government to maintain pensions as a discretionary tool used to control the size and composition of the military. These elements are retirement age, required length of service, and the power of involuntary separation. Over the years all of these elements have varied due to changing conditions.

As established by the Act of 3 August 1861, retirement for commissioned officers of the Army, Navy, and Marine Corps was based upon the completion of 40 consecutive years of service with no provision for retirement age. Even meeting this requirement was no guarantee of obtaining retired status since a provision was included to limit the number of retired to less than seven percent of the total number of active officers. With respect to disability, a provision was included whereby a special board judged each case to determine if retirement was warranted. Even those who were placed on the retired list were subjected to reassignment to duty at the discretion of the President (6:289-291).

Within the next year a retirement age of 62 was established by two separate pieces of legislation, one for the Navy and the other for the Army. In addition to establishing a retirement age the total years of active service was increased to 45 years. An officer could retire upon meeting either requirement at the discretion of the government (9:596; 10:329).

Less than ten years later the ceiling on retirees was changed from seven percent of the total active officer force to a maximum number of 300. The same law reduced the active duty service requirement to 30 years (5:317) and set retired pay at 75 percent of the pay of the officer's grade (33:3). The 30 year requirement was raised to 40 years in 1882 and included service in either volunteer or active forces as an enlisted man or officer. A mandatory retirement age of 64 years was established and for the first time officers in excess of required numbers could leave the service with benefits (4:118).

The first law for the retirement of enlisted personnel based on length of service was passed in 1885. It provided for retirement after 30 years of service at 75 percent of the pay of the grade in which retired. This law applied solely to the Army and was extended to cover the Navy in 1899 (23:3).

In 1907 the years of service requirement for officers once again fell to 30 years. Computation of the time could now include total combined time spent in the Navy, Army, or Marine Corps (7:1217-1218).

The question of involuntary separation was addressed at length in the Act of 4 June 1920. This act established provisions to classify all officers into one of two categories, A or B. Those in category A were to be retained in

military service and those in category B were considered unfit for retention. After placement into category B an officer's record was further reviewed to determine if such placement was due to neglect, misconduct, or avoidable habits. If the decision was in the affirmative the officer was discharged with no benefits. If, however, the decision was negative, various options were presented to allow for a continuance of pension benefits (8:773-774).

The next major change came in 1935 when the active duty requirement was reduced to a minimum of 15 years to reduce the cluster of people who had entered the service during World War I (14:2). Legislation in 1940 maintained the 15 year minimum and established mandatory retirement ages to be effective in 1942 for years thereafter. All officers below the rank of brigadier general who reached the age of 60 faced mandatory retirement. Special provisions were included to provide for the promotion before retirement of anyone completing 28 years or more of service who had previously been denied promotion due to grade limitations (11:380).

The Officer Personnel Act of 1947 provided for the involuntary separation of those passed over twice for permanent promotion. Those who were eligible for retirement would be placed on the retired list and paid 2½ percent times years of service times annual basic pay of the

grade held at retirement. Others would be honorably discharged with severance pay of two months' pay for each year of service completed, not to exceed two years' pay. It also stated that an officer within two years of being eligible for retirement pay could not be involuntarily separated (39:804,896-906).

The Army and Air Force Vitalization and Retirement Equalization Act of 1948 insured the standardization of retirement laws for all services. Provisions included voluntary retirement at 20 years of service, annual retirement pay computed at 2½ percent times years of service times annual basic pay of the grade held at retirement (not to exceed 75 percent of annual basic pay), and severance pay for officers involuntarily separated of one month's pay per year of service, not to exceed one year's pay (12:1084-1085). Severance pay was limited to $15,000 in 1962, but no other significant changes have been made to the length of service retirement system since 1948 (33:3).

THE CURRENT MILITARY RETIREMENT SYSTEM

Unlike private pension plans, the structure of the military plan has been standardized for all personnel and all military services.

Retirement Age

No specific minimum age has been set for military retirees. Twenty years has been the minimum length of service required before retirement (29:133). The maintenance of a youthful combat force and promotion opportunities have been arguments for this early retirement age (53:5).

Eligibility and Vesting

The completion of 20 years of service has been the only eligibility requirement. All who have reached this point have had the right to a pension, but considerable criticism has stemmed from the fact that no vesting provisions are in effect to provide benefits for those completing less than 20 years of service (53:7). Since an individual is entitled to a pension upon the completion of 20 years of service, it is at this point that one becomes vested.

Computation of Benefits

Military retirement benefits have been computed by multiplying the annual basic pay of the individual on the day of retirement by 2½ percent times the number of years of service, not to exceed 75 percent of pre-retirement annual basic pay (12:905).

Death Benefits

A survivor benefit plan has been made available to military retirees. It is voluntary and requires member contributions. Survivor income of up to 55 percent of retired pay is provided (33:15).

Disability Benefits

Disability annuities are provided by the DOD and VA as discussed in Chapter 1. A member eligible for disability payments may elect either source but it is usually advantageous to choose VA because VA annuities are exempt from Federal income tax (33:10). The seriousness and extent of the disability determines the level of disability income (29:134).

Termination of Employment Benefits

The military retirement system has not provided benefits for anyone separating before 20 years unless disabled. Severance pay for those involuntarily terminated has been limited to $15,000. This applies only to Reserve enlisted personnel with over five years of service separated involuntarily in a reduction in force and to officers separated involuntarily (33:3-4).

Financing of the Plan

No direct contribution has been made by military personnel toward pensions. Annual appropriations are made by Congress to meet current pension payments on a pay-as-you-go basis (43:20).

CRITICISM OF THE CURRENT MILITARY RETIREMENT SYSTEM

Costs

A fourfold increase in the annual cost of military pensions over the last ten years is illustrated in Table 1. A 1978 Congressional Budget Office study stated that reforms can be instituted to reduce these costs but that cost reductions would not be evident until the end of this century. The study recognized the importance of the retirement system in meeting personnel needs and emphasized that changes to reduce costs should allow for the personnel needs of the services to be met (53:ix-x,8-9).

The President's Commission on Military Compensation stated that the current military retirement system is too generous because it allows an annuity after 20 years of service, before old age. The PCMC further stated that this system can no longer be justified (43:2). Table 2 compares the estimated purchasing power generated by military pensions to typical pensions of other groups.

Table 2

Lifetime Value of Military Retirement Under Different Retirement Provisions

Retirement Plan	20 Years of Service		30 Years of Service	
	Value	Age Annuity Begins	Value	Age Annuity Begins
OFFICER				
U.S. military	$420,000	43	$590,000	53
Typical private	40,000	62	135,000	62
Typical non-federal public	70,000	60	225,000	60
Federal Civil Service	90,000	60	465,000	55
Typical police and fire	260,000	50	575,000	53
West German military	not entitled		880,000	53
British military	350,000	43	490,000	53
Canadian military	360,000	43	550,000	53
ENLISTED				
U.S. military	$190,000	39	$280,000	49
Typical private	15,000	62	45,000	62
Typical non-federal public	20,000	60	70,000	60
Federal Civil Service	25,000	60	155,000	55
Typical police and fire	90,000	50	265,000	50
West German military	not entitled		360,000	52
British military	not entitled		215,000	49
Canadian military	165,000	40	260,000	49

Source: Report of the President's Commission on Military Compensation (43:31).

Retention of Personnel

A 1977 Congressional Budget Office study noted that incentives are needed to provide for retention of personnel with 4 to 12 years of service and of those with more than 20 years of service. It pointed out that the current military retirement system encourages personnel to exit shortly after completing 20 years of service and provides little incentive for enlisted personnel to remain on active duty past the four year point. It suggested that since pension benefits have a strong influence on retention, pension reform is the key to improving retention patterns (52:77-81).

Vesting

The Defense Manpower Commission also indicated that the present pension system is inconsistent with DOD personnel requirements and suggested vesting at the ten year point as one method to improve retention (23:349-375). The fact that no one is entitled to retirement benefits under the military pension system before 20 years of service is considerably below the standards set by ERISA for private plans (33:6), which specify that partial vesting must occur with five to ten years of service and full vesting between ten and fifteen (29:164).

Canby called attention to another problem which the lack of vesting before 20 years has aggravated. Since the

services follow an "up-or-out" promotion policy, innovative activity is avoided in many instances out of a fear that deviations from standard procedures might lead to accusations of incompetence and become the basis for nonpromotion and subsequent administrative discharge before pension eligibility. Canby noted that commanders have been hesitant to recommend separation of personnel who have not completed 20 years because of this "up-or-out" policy (21:147). Since no severance pay is available for active duty enlisted members, there has been an even greater hesitancy to recommend separation of an individual in this group (33:7).

Cooper and Rostker claimed that vesting at an earlier date would create a better environment for involuntary termination of less productive persons. However, it would also provide incentive for the most competent to leave (22:8).

Another effect of the lack of vesting before 20 years is to make mobility more expensive for military personnel as they approach the 20 year point, according to Fechter and Mahoney (26:2,24). Canby noted that earlier vesting would contribute to economic efficiency by increasing labor mobility (21:147).

Age/Length of Service

The availability of a retirement annuity after 20 years of service has allowed many to receive military pension benefits below the age of 40. A youthful force may have been warranted when the present pension system was instituted 30 years ago but Admiral Rickover has indicated that most jobs in the military can be performed by persons of 55 or older (53:10-11). The provision for retirement after 20 years of service has led to earlier retirement and a shorter career than traditionally allowed by private plans.

Financing

The fact that the military pension system is unfunded has been another source of criticism. Since there is no fund, benefits are provided as a part of the annual DOD budget. Some have suggested a change to a contributory system, but the Defense Manpower Commission (23:380), Congressional Budget Office (52:84), and the President's Commission on Military Compensation have recommended keeping the current non-contributory, pay-as-you-go financing method (43:3).

Proposed Alternative Plans

Many alternatives to the military pension system have been suggested by various sources. Three recent proposals are reviewed in this thesis.

Uniformed Services Retirement Modernization Act. This proposal included provisions for improved vesting, more equitable severance pay, and would have reduced the costs of military pensions by reducing benefits for retirees with less than 30 years of service and by reducing benefits while Social Security payments were being received. This last provision is known as a "Social Security offset" (33:6).

The provisions of the proposed Retirement Modernization Act are:

1. The highest year of average annual basic pay would be used for benefit computation.

2. This amount would be multiplied by 2½ percent times the number of years of service completed less than 25 plus three percent times the number of years of service completed above 24, not to exceed 78 percent of the highest year's average annual basic pay.

3. The multiplier in step 2 above would be reduced 15 percent until the point when 30 years of service would have been completed.

4. For those voluntarily separating after 10-19 years, the benefit would be payable at age 60.

5. At age 65, the pension benefit would be reduced by 50 percent of that part of a person's Social Security benefit attributable to military service.

6. Benefits to those involuntarily separated would be available to enlisted as well as officer personnel (24:B-2).

Defense Manpower Commission proposal. The Defense Manpower Commission proposal included several provisions of the Retirement Modernization Act but eliminated the possibility of an immediate pension after 20 years of service unless all 20 years were in combat jobs. A multiplier of 1 to 1½ would be assigned to each job. Non-combat jobs would be assigned a multiplier of 1 while combat jobs would be assigned 1½. Retirement points would be accumulated at the rate of 1/365th times the multiplier of the job to which an individual was assigned per day. To receive a pension immediately upon retirement 30 points would be required. Although 30 would be the maximum number of points used in the pension calculation, normal careers would be permitted to last up to 40 years (23:16-17; 33:4-5).

Other provisions of the Defense Manpower Commission's recommendation include:

1. The highest three years' basic pay would be averaged and used in computing the pension benefit.

2. This average would be multiplied by the number of retirement points times 2-2/3 percent to determine the yearly pension benefit.

3. Vesting would occur at the ten year point but for those with less than 30 retirement points, the pension payments would begin at age 65 or would be actuarially reduced at age 60.

4. Those involuntarily separated could choose between cash readjustment pay plus a deferred annuity or double readjustment pay (23:16-17,374-375; 33:5-6).

<u>President's Commission on Military Compensation retirement plan</u>. Several of the provisions of the Defense Manpower Commission plan were also included in the retirement plan recommended by the President's Commission on Military Compensation. These were vesting after ten years, a pension based on the high three years' average basic pay, and the elimination of an immediate pension for 20 year retirees. Like the proposed Retirement Modernization Act, the President's Commission proposal included a Social Security offset. A unique feature of the proposal of the President's Commission is a deferred compensation trust fund based on government contributions with vesting at the ten year point. This fund would be in addition to the regular pension and could be withdrawn in a number of ways (43:62-65).

The provisions of the retirement plan proposed by the President's Commission on Military Compensation (43:62-73) are:

1. After the completion of ten or more years of service, pension payments would be provided as indicated by Table 3.

Table 3

Eligibility for Military Pension (PCMC Plan)

Years of Active Service Completed	Age at Which Annuity Begins
10-19	62
20-29	60
30 or more	55

The amount of the pension payment would be computed by multiplying the average of the highest three years' basic pay by 21.25 percent for those completing ten years of service, with 2.75 percent added to the multiplier for each additional year of service with a limit of 90 percent at 35 years.

2. When Social Security payments begin, the military pension would be reduced by the product of 1.25 percent times years of service completed times the amount of the Social Security primary benefit. However, this offset could not exceed 50 percent of a person's military retirement check.

3. A deferred compensation trust fund would be established for each member completing five years of service. Government contributions to this fund would be made in accordance with Table 4.

Table 4

Government Contribution to Deferred Compensation Trust Fund

Years of Service Completed	Percentage of Basic Pay
5-10	20
11-20	25
21-25	15
26-30	5

An individual would be vested upon completion of ten years of service and could withdraw up to half of the amount in his trust fund account (which draws interest) while still on active duty. The purpose of the deferred compensation trust fund would be to aid in the transition to civilian life and improve the retention of personnel performing difficult and distasteful duties.

4. Severance pay would be received by officers and enlisted members involuntarily separated with more than five but less than 30 years of service. Severance pay would be one-quarter of one month's basic pay per year of service completed up to ten and one-half of one month's basic pay for 11-30 years up to a maximum of 12 months' basic pay. Those involuntarily separated after ten or more years of service would be entitled to the pension benefit and the trust fund. Anyone eligible for an immediate pension would not receive severance pay.

5. Those with 25 years or more of active service would be immediately entitled to medical, BX and commissary privileges. Those with 15 to 24 years of active service would be entitled when pension payments begin, and those with less than 15 years of service would have no entitlement.

6. No military pensions would be paid to Federal Civil Service employees.

7. Pension payments would be adjusted for rises in the Consumer Price Index.

8. Those with four or more years of service when the plan goes into effect would retire under current rules.

SUMMARY

Although the growth of private pension plans has roughly coincided with that of military retirement, significant differences exist in structure. There has been a variety of private plans in existence but in recent times only one military plan as specified by law has governed

all military pensions. Practically all retirees under private and military pensions are recipients of Social Security payments.

Financing

One major difference is in the area of financing. Private pensions are financed by joint contributions of the employee and employer or solely by the employer due to tax advantages. Further, contributions to a private plan are put into a fund so that future pension payments to current employees is guaranteed. No funds accumulate for the Social Security or military retirement system since both operate on a pay-as-you-go basis, but it is significant that there are explicit contributions to the Social Security system. Current Social Security contributions are used to pay current benefits. No contributions are made toward military retirement so money must be annually appropriated by Congress out of current revenues to pay benefits to retired military personnel. The ability of the government to increase taxes as the number of government pension beneficiaries and the amounts on pension checks increase makes possible the pay-as-you-go aspect of Social Security and military retirement. However, pay-as-you-go financing has been a source of constant criticism for both Social Security and military retirement.

Retirement Age

Although no age is specified for military retirement, the completion of 20 years of service is required to qualify for a pension. This provision of military retirement has also been a source of criticism since it enables most military personnel to retire and immediately begin receiving pension checks before reaching the age of 45. Therefore, military personnel can be on a pension financed by tax revenues for 20 or more years longer than their civilian contemporaries, who usually cannot retire and begin drawing a pension before reaching the normal retirement age of 65 as required by Social Security and most private plans.

Vesting

Another difference between military and private plans is in vesting requirements. Full vesting occurs no later than upon the completion of ten years of service under Social Security or 15 years of service for private plans. Those in the military must complete 20 years of service to be vested. Although the longer vesting period required by the military plan may increase personnel retention, it is the main shortcoming of the military retirement system in comparison with plans available to the general public and a recurring source of criticism.

Mobility of Workers

The 20 year requirement for the vesting of military retirement benefits inhibits the mobility of military personnel, especially those who have served over half of the time necessary to qualify for a pension. Private plans also inhibit worker mobility but it is important to note that some pension plans were established to improve employee retention, which necessarily inhibits mobility. On the other hand, Social Security does not inhibit labor mobility since its benefits are not lost by a change in employer.

Income Redistribution

A further quality of Social Security is that it is an important part of the income redistribution function in the economy. Military pension payments also result in a redistribution of income--from the taxpayers to military retirees. Income redistribution occurs in both of these systems because of pay-as-you-go financing. Private pensions, which accumulate contributions in order to pay future obligations, do little in the way of income redistribution.

Deferred Wages

A basic philosophy of private and military pensions is that a lower wage is accepted during working years in

return for deferred wages in the form of a retirement pension. Private plans have used this idea to increase total employee compensation through a pension plan when wage increases were limited or forbidden by the government. The availability of deferred wages in the form of a pension has been an excuse for traditionally low wages in the military.

It can be concluded from information presented in Chapters 2 and 3 that the military retirement plan is considerably more generous than most private plans although it falls short in its vesting provision. Much concern over the increasing cost of military retirement in recent years has been evident. Also, it has been concluded by some groups that the military retirement system is inconsistent with defense manpower needs due to the career patterns it encourages. As a result, several alternate retirement systems for military personnel have been proposed. The study groups that have proposed changes to the military retirement system have focused attention on its generosity and rising costs. Increasing public and Congressional concern over military pension costs make reform inevitable.

Chapter 4

METHODOLOGY

The objective of this research was to compare the matured annual cost of the current military retirement system with the matured annual cost of the system recommended by the President's Commission on Military Compensation, which was summarized in Chapter 3. Since the purpose was not to predict the cost at some future point but to make a comparison of the current and PCMC length of service retirement system annual costs, calculations utilized 1978 dollars and the 1 October 1977 pay scale. An existing estimate of the matured annual cost of the current system was compared to an estimate of the matured annual cost of the proposed PCMC retirement system based on the assumptions made in this analysis. This comparison provided the answer to the research question.

Assumptions

1. The numbers of officers and enlisted personnel on active duty are 274,514 and 1,802,530, respectively (43:93).

2. Officers and enlisted personnel enter military service at ages 23 and 19, respectively (43:21).

3. Continuation rates (percent of those on active duty in one year expected to continue into the next year)

are as indicated in Table 5. Use of these continuation rates accounts for changes in personnel retention patterns caused by the PCMC plan as expected by DOD analysts.

4. Life expectancies will be as indicated by columns 4–8 of Table 6. These data are based on life expectancies for white males since most retirees are white males.

5. The three years of highest pay are the last three years on active duty for all personnel. Table 7 contains the average annual basic pay for 0–30 years of service completed. From Table 7, average annual basic pay for the last three years of service was computed for officers and enlisted personnel; results are contained in Table 8 for 10–30 years of service completed.

6. At the point in time when retirement costs have matured, the number of entries into the military equals the number of exits and these figures remain constant. The number of yearly entries and exits is determined by applying the continuation rates in Table 5 to varying numbers of entries to determine the number of entries that would maintain the personnel levels of 274,514 officers and 1,802,530 enlisteds. This calculation also provides the number of personnel in each age group and the number exiting the military in each age group. The number of annual exits attributable to death is computed by multiplying the probability of death from column 7 or 8 of Table 6 times the number of exits in each age group. Deaths are subtracted from total exits for those with at least ten years of service completed to yield the number of exits that have a vested claim to a retirement annuity. Calculations for officers and enlisted personnel must be separated due to differing pay scales and ages.

The number of entries and exits, the number of personnel in each age group, and the number of exits and deaths in each age group remain constant from year to year in a matured military retirement system. To maintain a constant military force level there must be new recruits each year to equal the number of personnel exiting.

7. Military retirees begin receiving Social Security payments at age 65. The primary benefit for retired officers is $5760 annually and for retired enlisted personnel, $4800 annually.

Table 5

Continuation Rates

Year of Service	Percent Continuing Into This Year From Previous Year	
	Officer	Enlisted
2	98.95	86.26
3	86.49	83.18
4	83.31	65.12
5	81.50	59.04
6	82.00	87.66
7	90.48	84.97
8	94.00	88.34
9	95.99	90.88
10	98.01	95.05
11	90.48	80.33
12	90.18	91.61
13	81.64	93.58
14	91.99	92.82
15	95.01	91.11
16	95.01	90.41
17	94.99	91.09
18	95.00	91.32
19	95.01	84.04
20	94.99	87.85
21	77.37	77.94
22	95.02	89.88
23	95.00	88.48
24	94.97	94.21
25	95.02	97.17
26	95.01	97.68
27	48.52	72.40
28	97.95	97.86
29	98.06	98.16
30	97.94	97.64

Source: Unpublished data, OSD/MRA&L (19).

Table 6

Life Expectancies

Years of Service Completed (YOSC) Upon Retirement	Age of Retirement		Probability of Living to Receive Pension		Number of Years Expected to Receive Pension Before Death	Probability of Death Between i-1 and i YOSC	
	Off.	Enl.	Off.	Enl.		Off.	Enl.
(i)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
10	33	29	.778	.772	15.0	.0018	.0017
11	34	30	.779	.774	15.0	.0019	.0017
12	35	31	.780	.775	15.0	.0020	.0017
13	36	32	.782	.776	15.0	.0021	.0017
14	37	33	.784	.778	15.0	.0023	.0018
15	38	34	.786	.779	15.0	.0025	.0019
16	39	35	.788	.780	15.0	.0027	.0020
17	40	36	.791	.782	15.0	.0029	.0021
18	41	37	.793	.784	15.0	.0032	.0023
19	42	38	.796	.786	15.0	.0035	.0025
20	43	39	.837	.825	16.2	.0039	.0027
21	44	40	.840	.828	16.2	.0043	.0029
22	45	41	.844	.831	16.2	.0048	.0032
23	46	42	.849	.834	16.2	.0054	.0035
24	47	43	.854	.837	16.2	.0060	.0039
25	48	44	.860	.840	16.2	.0066	.0043
26	49	45	.866	.844	16.2	.0072	.0048
27	50	46	.873	.849	16.2	.0078	.0054
28	51	47	.880	.854	16.2	.0084	.0060
29	52	48	.888	.860	16.2	.0091	.0066
30	53	49	.977	.943	19.7	.0100	.0072
31	54	N/A	.988	N/A	19.7	N/A	N/A
33	56	N/A	1.000	N/A	19.0	N/A	N/A
35	58	N/A	1.000	N/A	17.6	N/A	N/A

Source: Columns 4–8: U.S. Department of Health, Education, and Welfare. Vital Statistics of the United States 1973, Vol. 2, Part A, Sec. 5. (Washington: Government Printing Office, 1977) Tables 5-2 and 5-3.

Table 7

Average Annual Basic Pay

Years of Service Completed	Officer	Enlisted
0	$ 8,757	$ 5,210
1	8,795	5,504
2	10,321	5,919
3	12,886	6,413
4	14,546	6,947
5	14,918	7,010
6	15,591	7,492
7	15,428	7,653
8	15,929	8,043
9	16,033	8,163
10	17,164	8,598
11	17,241	8,719
12	18,448	9,255
13	18,588	9,472
14	19,455	9,925
15	19,461	10,077
16	20,339	10,479
17	20,568	10,668
18	21,713	11,072
19	21,807	11,213
20	22,763	11,522
21	23,125	11,729
22	24,607	12,509
23	25,114	12,989
24	25,798	13,321
25	26,315	13,739
26	28,273	15,706
27	28,680	15,927
28	28,064	16,136
29	28,047	16,068
30	31,354	15,761

Source: Unpublished data, OSD/MRA&L (19).

Table 8

Average Annual Basic Pay for Last Three Years of Service

Years of Service Completed	Officer	Enlisted
10	16,375	8,268
11	16,813	8,493
12	17,618	8,857
13	18,092	9,149
14	18,830	9,551
15	19,168	9,825
16	19,752	10,160
17	20,123	10,408
18	20,873	10,740
19	21,363	10,984
20	22,094	11,269
21	22,565	11,488
22	23,498	11,920
23	24,282	12,409
24	25,173	12,940
25	25,742	13,350
26	26,795	14,255
27	27,756	15,124
28	28,339	15,923
29	28,264	16,044
30	29,155	15,988

Source: Computed from Table 7.

As shown by Table 7, the incomes of officers with at least 12 years of service completed exceed the maximum amount applicable in 1978 of $17,700 on which Social Security contributions are made (54:6). Since some earn less than the maximum taxable amount, it is assumed for this research that the average monthly primary benefit for retired officers is $480 rather than the maximum of $490 (25:667), which equals an annual amount of $5760.

For enlisted retirees, it is assumed that the average monthly primary benefit is $400. According to Feldstein, one who has always had median earnings (which was $8500 in 1977) is entitled to a primary benefit of $326 (27:92). Table 7 indicates that enlisted personnel with ten or more years of service completed earn above this amount but the average earnings are all below the maximum taxable amount of $17,700. Since the earnings of enlisted personnel are generally closer to median earnings than to the maximum taxable amount, the $400 monthly primary benefit is assumed which equals a $4800 annual benefit amount.

It is also assumed that military personnel after retirement continue to earn the same or a higher level of income as a civilian as earned in the military since earnings after military service are included in the computation of the Social Security primary benefit.

8. There are 1,119 generals and admirals on active duty (18:B-1) distributed in the same grade ratio as Air Force generals (2:134), with 0-7s included in the force with less than 30 years of service completed. Those in the grade of 0-8 through 0-10 are distributed as follows:

Grade	Number	YOSC	Pay (2:136)	Annual Exits
0-10	39	35	$3958.20	9
0-9	117	33	3650.00	29
0-8	402	31	3495.00	100
	558			

It is assumed that approximately 25 percent of the generals and admirals on active duty exit each year and the vacancies are filled from those in the next lower grade.

9. Annual deferred compensation trust contributions by the government are the amounts shown in Table 9.

Table 9

Annual Government Deferred Compensation
Trust Fund Contribution

Years of Service Completed	Officer	Enlisted
5	$2,984	$1,402
6	3,118	1,498
7	3,086	1,531
8	3,186	1,609
9	3,207	1,633
10	3,433	1,720
11	4,310	2,180
12	4,612	2,314
13	4,647	2,368
14	4,864	2,481
15	4,865	2,519
16	5,085	2,620
17	5,142	2,667
18	5,428	2,768
19	5,452	2,803
20	5,691	2,881
21	3,469	1,759
22	3,691	1,876
23	3,767	1,948
24	3,870	1,998
25	3,947	2,061
26	1,414	785
27	1,434	796
28	1,403	807
29	1,402	803
30	1,568	788

Source: Computed from Tables 4 and 7.

Method of Calculations

The annual retirement cost under the PCMC plan is the sum of length of service pension payments and deferred compensation trust fund contributions. The estimation of the cost of both the length of service pension payments and deferred compensation trust fund will include separate calculations for officers and enlisted personnel due to the differences in age and pay between the two groups.

Length of service pension payments. The annual cost of length of service pension payments was computed separately for officers and enlisted personnel and then the two parts were summed. The following algorithm was used for each set of calculations:

$$((((((B_{i-1} - B_i) - (B_{i-1} \times D_i)) \times L_i) \times P_i) \times H_i) \times R_i) -$$

$$((.0125 \times i \times S) \times (\frac{\text{Age Pension Begins} + P_i - 65}{P_i}) \times N_i)$$

i = the number of years of service completed (YOSC), 10-30 (to include 31, 33, and 35 for O-8s, O-9s, and O-10s, respectively)

B_{i-1} = the number of beginning i years of service (YOS) which is the same as the number completing i-1 years of service

B_i = the number completing i years of service

D = the probability of death between i-1 and i YOSC (Table 6, columns 7 and 8)

L = the probability of living to receive a pension (Table 6, columns 4 and 5)

P = life expectancy at the age pension payments begin for those living to receive a pension (Table 6, column 6)

H = average annual basic pay for last three years of service [assumed to be the three years of highest pay] (Table 8)

R = percentage applied to H to determine amount of retirement annuity. For ten YOSC, R = 21.25 percent; 2.75 percent is added for each additional YOSC to a maximum of 90 percent for 35 YOSC

S = Social Security primary benefit ($5760 annually for officer retirees, $4800 for enlisted)

N_i = the total number on a pension with i YOSC at any time after the system is matured. Calculated as follows: $(((B_{i-1} - B_i) - (B_{i-1} \times D_i) \times L_i) \times P_i)$

<u>Deferred compensation trust fund (DCTF)</u>. The annual cost of the DCTF was also computed separately for officers and enlisted personnel and then the two parts were summed. The following algorithm was used for each set of calculations:

$$G_i \times B_i$$

i = YOSC (5-30)

G = the annual government DCTF contribution per individual (Table 9)

B = the number completing i YOS

Cost Comparison of PCMC and Current System

The sum of the total annual cost of the DCTF and the total annual cost of the length of service pension payments was added to yield the total annual PCMC military retirement cost when the system would be matured. In order to satisfy the objective of this research and provide an answer to the research question, the cost that resulted from the calculations described in this chapter was compared to an estimate of the cost of the current system when matured that was similarly determined. The estimate of the matured cost of the current length of service retirement system used for this comparison was $10,592,469,000 (49).

Chapter 5

RESULTS OF CALCULATIONS

The results of the calculations to estimate the total annual cost of the matured retirement system recommended by the PCMC are shown below together with like data for the current military retirement system. The complete calculations are contained in the appendices.

Total Annual Military Retirement Cost	
PCMC	$ 6,547,697,445
Current	$10,592,469,000

Total Annual Number of Personnel Receiving Retirement Pensions	
PCMC	800,286
Current	1,532,453

The calculations illustrate that the matured PCMC system would result in an annual cost of approximately 62 percent of the cost of the current system and would make pension payments to 52 percent of the number of personnel receiving a pension under the current system (matured). Although the PCMC plan allows for retirement from active duty with a vested right to a pension at a younger age, those retired under the PCMC system would not receive

pension payments until age 55, 60, or 62 depending on the number of years served. The vesting of retirement benefits after ten years of service under the PCMC plan together with the later age for receipt of pension accounts for the lower cost and lower number of personnel receiving pensions. Consequently, many would be retired from active duty with vested pension rights but would be below the age to begin receiving pension payments under the PCMC plan.

Chapter 6

CONCLUSION AND RECOMMENDATIONS FOR FURTHER STUDY

Conclusion

The basic objective of this thesis was to compare the total annual cost of the present length of service retirement system for military personnel with the total annual cost of an alternative system recommended by the PCMC, using in the calculation the personnel retention rates projected by the DOD for the PCMC system. To this end, a literature review was carried out to provide a better understanding of the problem. Next, an algorithm was developed and assumptions were made to facilitate an estimate of the total annual cost of the matured PCMC plan. Finally, the calculations were performed and results were presented in Chapter 5, which provided the information necessary to answer the research question.

It must be stressed that the answer was provided by cost estimates based on the author's assimilation of information relating to the PCMC alternative to the military retirement system. The answer and other evaluations in this thesis are solely the author's judgment and do not necessarily reflect the position of the U.S. Government or

its agencies. The conclusion of this thesis will be presented by answering the research question.

Research question. Would the implementation of the military retirement system recommended by the PCMC reduce military retirement costs?

As presented in the previous chapter, the author's estimate of the total annual cost of the matured PCMC military retirement system represents a decrease of 38 percent from the cost of the present system. Furthermore, this reduction is consistent with the results claimed by the PCMC (43:93-94) even though different retention rates were used.

It is important to note that the total annual cost of each system represents the cost at a time in the future when costs have matured with only one system in existence. In reality, the period during which both systems would be in effect as the PCMC plan was phased in and the current plan was phased out would have higher total annual military retirement costs because of contributions to the deferred compensation trust fund in addition to pensions paid to those retiring under the current plan.

Recommendations for Further Study

While the cost of the military retirement system has been an important issue the author feels that there are

other issues that must be considered before any change is implemented. These issues warrant further research because of their potential impact on retirement costs, military personnel costs, and the military personnel system. The effects of a change in retirement policy on all components of the personnel system should be considered before a change is made in order to insure that the required numbers, quality, and structure of the military forces can be effectively and efficiently maintained.

Up-or-out promotion system. The up-or-out promotion system forces the involuntary separation of personnel who have not been promoted to the next higher rank after a specified time in grade. The rationale for forcing out productive personnel should be reexamined with respect to current force requirements. Some elements of this issue are the loss of valuable experience to the service, the cost of recruiting and training replacements for those forced out, the cost in separation pay for those forced out, and the longer period in which retirement pensions will be paid to those forced out, which taken together make up a significant part of the cost of the "youthful and vigorous" military force as maintained today. If the average career length could be extended many of these costs could be reduced, most notably the cost of retirement pensions since individuals would be in retired status for a shorter period due to lengthier careers.

Retention. A detailed study of the effect of any proposed changes in the retirement system on the retention rates and career patterns of personnel on active duty should be made. This study could be extended to include potential enlistees (high school students and recent graduates) and potential officers (college students and recent graduates) and could seek to determine the relative importance of pay, retirement, and other benefits on the decision to enter the military. Further, current and potential military personnel could be surveyed to determine what inducements might influence them to remain on active duty for a longer period or to enter the service, respectively. Also, former military personnel could be polled to determine what influenced them to leave the service and identify sources of discontent so that appropriate corrective action could be taken.

APPENDIX A

CALCULATIONS RESULTS: PERSONNEL

APPENDIX A

This appendix contains the results of calculations in numbers of personnel as performed by the methodology in Chapter 4 to estimate the annual cost of the military retirement system when matured as proposed by the PCMC. Below is an explanation of the numbered columns that follow.

Column	Explanation [Symbol from Chapter 4]
1	The number of years of service completed (YOSC) [i], which was determined by applying the continuation rates given in Table 5 to varying force sizes to determine the number of annual entries to maintain the desired force level. 29,021 officer entries and 332,490 enlisted entries were required each year to maintain the desired force level.
2	The number beginning i years of service (YOS) which is the same as the number completing i-1 YOS [B_{i-1}].
3	The number completing i YOS [B_i].
4	Annual exits after i YOSC [$B_{i-1} - B_i$].
5	Number of annual exits due to death [$B_{i-1} \times D_i$].
6	Number of annual retirements [$(B_{i-1} - B_i) - (B_{i-1} \times D_i)$].
7	Number of those retiring expected to live to receive pension [$((B_{i-1} - B_i) - (B_{i-1} \times D_i)) \times L_i)$].
8	Annual number of retirees in each YOSC group receiving a pension after the system matures [$(((B_{i-1} - B_i) - (B_{i-1} \times D_i)) \times L_i) \times P_i)$; referred to as N_i in DCTF calculation].

Table 10

Calculations Results: Personnel

(1)	(2) Off.	(2) Enl.	(3) Off.	(3) Enl.	(4) Off.	(4) Enl.
1	29,021	332,490	28,716	286,806	305	45,684
2	28,716	286,806	24,837	238,565	3,879	48,241
3	24,837	238,565	20,691	155,353	4,146	83,212
4	20,691	155,353	16,863	91,721	3,828	63,632
5	16,863	91,721	13,828	80,402	3,035	11,319
6	13,828	80,402	12,512	68,318	1,316	12,084
7	12,512	68,318	11,761	60,352	751	7,966
8	11,761	60,352	11,289	54,848	472	5,504
9	11,289	54,848	11,065	52,133	224	2,715
10	11,065	52,133	10,011	41,878	1,054	10,255
11	10,011	41,878	9,028	38,365	983	3,513
12	9,028	38,365	7,371	35,902	1,657	2,463
13	7,371	35,902	6,780	33,324	591	2,578
14	6,780	33,324	6,442	30,361	338	2,963
15	6,442	30,361	6,120	27,450	322	2,911
16	6,120	27,450	5,814	25,004	306	2,446
17	5,814	25,004	5,523	22,834	291	2,170
18	5,523	22,834	5,247	19,189	276	3,645
19	5,247	19,189	4,984	16,858	263	2,331
20	4,984	16,858	3,857	13,139	1,127	3,719
21	3,857	13,139	3,664	11,809	193	1,330
22	3,664	11,809	3,481	10,449	183	1,360
23	3,481	10,449	3,306	9,844	175	605
24	3,306	9,844	3,141	9,565	165	279
25	3,141	9,565	2,985	9,343	156	222
26	2,985	9,343	1,448	6,765	1,537	2,578
27	1,448	6,765	1,418	6,620	30	145
28	1,418	6,620	1,391	6,498	27	122
29	1,391	6,498	1,362	6,345	29	153
30	1,362	6,345	138	6,299	1,224	6,345
31	402				100	
33	117				29	
35	39				9	
	274,514	1,802,530			29,021	332,490
	2,077,044				361,511	

Table 10 (cont'd)

	(5)		(6)		(7)	
	Off.	Enl.	Off.	Enl.	Off.	Enl.
10	20	89	1,034	10,166	804	7,848
11	19	71	964	3,442	751	2,664
12	18	65	1,639	2,398	1,278	1,858
13	15	61	576	2,517	450	1,953
14	16	60	322	2,903	252	2,259
15	16	58	306	2,853	241	2,222
16	17	55	289	2,391	228	1,865
17	17	53	274	2,117	217	1,655
18	18	53	258	3,592	205	2,816
19	18	48	245	2,283	195	1,794
20	19	46	1,108	3,673	927	3,030
21	17	38	176	1,292	148	1,070
22	18	38	165	1,322	139	1,099
23	19	37	156	568	132	474
24	20	38	145	241	124	202
25	21	41	135	181	116	152
26	21	45	1,516	2,533	1,313	2,138
27	11	37	19	108	17	92
28	12	40	15	82	13	70
29	13	43	16	110	14	95
30	14	46	1,210	6,299	1,182	5,940
31	4		96		95	
33	1		28		28	
35	1		8		8	

Table 10 (cont'd)

(8)

	Off.	Enl.
10	12,060	117,720
11	11,265	39,960
12	19,170	27,870
13	6,750	29,295
14	3,780	33,885
15	3,615	33,330
16	3,420	27,975
17	3,255	24,825
18	3,075	42,240
19	2,925	26,910
20	15,017	49,086
21	2.398	17,334
22	2,252	17,804
23	2,138	7,679
24	2,009	3,272
25	1,879	2,462
26	21,271	34,636
27	275	1,490
28	211	1,134
29	227	1,539
30	23,285	117,018
31	1,872	
33	532	
35	141	
	142,822	657,464

800,286

APPENDIX B

CALCULATIONS RESULTS: COSTS

APPENDIX B

This appendix contains the results of calculations in dollar amounts as performed by the methodology in Chapter 4 to estimate the annual cost of the military retirement system when matured as proposed by the PCMC. Below is an explanation of the numbered columns that follow.

Column	Explanation [Symbol from Chapter 4]
1	The percentage that average annual basic pay for last three YOS is multiplied by to determine amount of retirement annuity [R_i].
2	Total pension cost before Social Security offset is applied (N_i x H_i x R_i).
3	Annual Social Security offset per individual who retired with i YOSC [1.25 x YOSC x S].
4	Percentage of the time an individual is receiving a pension that the amount of the pension is reduced by the Social Security offset $\left[\frac{\text{Age pension begins} + P_i - 65}{P_i}\right]$.
5	Total amount of Social Security offset for those who retired with i YOSC and are receiving pensions [N_i x Column 3 x Column 4].
6	Total annual DCTF cost for those with i YOSC [G_i x B_i].

Table 11

Calculations Results: Costs

YOSC [i]	(1) Percentage	(2) Off.	Enl.
10	21.25	$ 41,965,031	$ 206,828,154.00
11	24.00	45,455,627	81,451,267.20
12	26.75	90,344,664	66,030,927.82
13	29.50	36,025,695	79,065,886.72
14	32.25	22,954,712	104,372,492.20
15	35.00	24,252,312	114,613,537.50
16	37.75	25,500,820	107,295,315.00
17	40.50	26,527,648	104,643,333.00
18	43.25	27,759,785	196,206,912.00
19	46.00	28,743,917	135,966,542.40
20	48.75	161,745,479	269,660,690.30
21	51.50	27,867,098	102,553,490.80
22	54.25	28,707,742	115,131,346.40
23	57.00	29,591,502	54,314,565.27
24	59.75	30,217,103	25,297,958.80
25	62.50	30,230,761	20,542,312.50
26	65.25	371,896,580	322,162,857.40
27	68.00	5,190,372	15,323,636.80
28	70.75	4,230,517	12,775,102.51
29	73.50	4,715,707	18,148,411.26
30	76.25	517,641,558	1,426,548,885.00
31	79.00	62,024,227	
33	84.50	19,689,852	
35	90.00	6,027,496	
		$1,669,306,205	$3,578,933,624
		$5,248,239,829	

Table 11 (cont'd)

YOSC [i]	(3) Off.	(3) Enl.	(4)	(5) Off.	(5) Enl.
10	$ 720	$ 600	80.00	$ 6,946,560	$ 56,505,600.00
11	792	660	80.00	7,137,504	21,098,880.00
12	864	720	80.00	13,250,304	16,053,120.00
13	936	780	80.00	5,054,400	18,280,080.00
14	1,008	840	80.00	3,048,192	22,770,720.00
15	1,080	900	80.00	3,123,360	23,997,600.00
16	1,152	960	80.00	3,151,872	21,484,800.00
17	1,224	1,020	80.00	3,187,296	20,257,200.00
18	1,296	1,080	80.00	3,188,160	36,495,360.00
19	1,368	1,140	80.00	3,201,120	24,541,920.00
20	1,440	1,200	69.14	14,951,165	40,725,672.48
21	1,512	1,260	69.14	2,506,862	15,100,756.77
22	1,584	1,320	69.14	2,466,340	16,248,784.99
23	1,656	1,380	69.14	2,447,921	7,326,779.63
24	1,728	1,440	69.14	2,400,231	3,257,655.55
25	1,800	1,500	69.14	2,338,453	2,553,340.20
26	1,872	1,560	69.14	27,531,072	37,357,835.42
27	1,944	1,620	69.14	369,622	1,668,901.32
28	2,016	1,680	69.14	294,105	1,317,199.97
29	2,088	1,740	69.14	327,707	1,851,472.40
30	2,160	1,800	49.24	24,765,553	103,715,393.70
31	2,232		49.24	2,057,397	
33	2,376		52.63	665,260	
35	2,520		60.23	214,009	
				$134,624,465	$492,609,072
				$627,233,537	

Table 11 (cont'd)

YOSC [i]	(6) Off.	Enl.
5	$ 41,262,752	$ 112,723,604
6	39,012,416	102,340,364
7	36,294,446	92,398,912
8	35,966,754	88,250,432
9	35,485,455	85,133,189
10	34,367,763	72,030,160
11	38,910,680	83,635,700
12	33,995,052	83,077,228
13	31,506,660	78,911,232
14	31,333,888	75,325,641
15	29,773,800	69,146,550
16	29,564,190	65,510,480
17	28,399,266	60,898,278
18	28,480,716	53,115,152
19	27,172,768	47,252,974
20	21,950,187	37,853,459
21	12,710,416	20,772,031
22	12,848,371	19,602,324
23	12,453,702	19,176,112
24	12,155,670	19,110,870
25	11,781,795	19,255,923
26	2,047,472	5,310,525
27	2,033,412	5,269,520
28	1,951,573	5,243,886
29	1,909,524	5,095,035
30	1,919,232	4,963,612
	$595,287,960	$1,331,403,193
	$1,926,691,153	

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